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# Kentucky Resources Council

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Frankfort, Kentucky 40602  
(502) 875-2428

November 4, 1985


Ms. Beverly Huston  
Environmental Protection Agency  
Region IV  
345 Courtland Street  
Atlanta Georgia 30365

Dear Ms. Huston:

Enclosed please find the comments of the Kentucky Resources Council on the draft feasibility study and proposed remedial actions regarding the Lees Lane Landfill CERCLA site.

Please include these in the formal administrative record regarding the Landfill. Thank you very much,

Sincerely,



Thomas J. FitzGerald, Director  
Kentucky Governmental Accountability  
Project, Kentucky Resources Council

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COMMENTS OF THE KENTUCKY RESOURCES COUNCIL

ON

LEES LANE LANDFILL FEASIBILITY STUDY  
JEFFERSON COUNTY, KENTUCKY

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These comments are tendered by Thomas J. FitzGerald, Director, Kentucky Governmental Accountability Project of the Kentucky Resources Council, on behalf of the Council and its membership. The Kentucky Resources Council is a non-profit organization comprised of urban and rural Kentuckians, river recreationists, small farmers, and other environmentally concerned individuals who are dedicated to wise and prudent use of our Commonwealth's natural resources. The Council membership has been adversely affected by improper disposal of hazardous and solid wastes in landfills, and will be aggrieved if the current feasibility study process continues without major substantive modifications in the methodology and substantial clarification of the goals of the EPA regarding the long-standing threat to the Riverside Gardens community from the Lees Lane Landfill.

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#### INTRODUCTION

In reviewing the draft Feasibility Study for the Lees Lane Landfill, the Council is immediately struck with the paucity of vital and necessary data that exists regarding the nature and severity of the threat posed to the Riverside Gardens community by the Lees Lane Landfill (hereafter referred to as "Landfill").

The current status of the Landfill problem and agency knowledge can be briefly summarized:

1. On March 12, 1975, poisonous and highly explosive methane gas was discovered in an area of Riverside Gardens. The gas was detected generally in the neighborhood, and appeared to be particularly concentrated around a mobile home and two houses on Putman Avenue. Flash fires were reported around water heaters. Residents of seven homes at the southern end of Putman Avenue were evacuated on March 19th; steps began to purchase the homes and relocate these residents.

2. The Jefferson County Department of Health drilled four test wells to monitor the gas, which indicated that the gas had moved about 860 feet underground into the neighborhood. The Health Department also monitored septic tank pits on Putman Avenue. The gas was comprised largely of methane and carbon dioxide, however, 22 organic chemicals not typically found in natural gas lines or bogs (suspected sources of the problems) were detected. Reports indicated that the liquid industrial wastes deposited in the Landfill could account for the 22 chemicals detected.

3. The Health Department placed restrictions on housing construction in the area due to this problem; prohibiting all excavation for construction within 860 feet of the Landfill, and

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requiring testing for construction (new or renovation) for any dwellings within 1,500 feet of the Landfill. The excavation ban affected 56 homes; an additional 86 homes were within the zone of 860-1,500 feet.

4. A 1977 Interim Report by the Louisville and Jefferson County Planning Commission indicated that the gas problem had adversely affected the area and would continue to affect the future of the neighborhood. At a time when the community had appeared to be "on the upswing," land and house values, housing renovation and new construction, as well as any strategies for redevelopment and improvement of the neighborhood, were and continue to be adversely impacted and chilled by the uncertainty of the extent and severity of the gas problem. The Report concluded that the gas problem had "cast a shadow over the neighborhood . . . unless actions are taken to correct the gas problem, Riverside Gardens may slowly decay."

5. In 1979-1980, SCS Engineers designed and installed a gas collection and control system for the Jefferson County Department for Public Works, consisting of 31 extraction wells spaced at 100 foot centers within the boundary of the Landfill, roughly parallel to Howard and Putman Avenues. The system had a connective line and blower to collect and draw the gases to a blower house, where the gases would be combusted by a waste gas burner.

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6. The IT Corporation conducted a field investigation of the gas collector system in 1984, concluding that due to lack of maintenance, subsidence, vandalism, the system had in four short years degenerated to "a rather poor and inoperative state." Specifically, the investigation found that:

-- 17 of the 31 wells were not operating; only 12 appeared to be operating, leaving an efficiency of only 42%.

--High methane concentration was detected in certain wells tested and appeared unaffected or only slightly affected by use of the blower.

--"Dangerously high" methane concentrations and organic vapors were recorded on the Southern Tract and southern portion of the Central Tract of the Landfill.

--Concentrations of Benzene, Dichloroethane, Ethylbenzene, Heptane, Toluene, Xylenes, and 11 unknown organics with concentrations of up to 47 ppm, were detected.

--No mention is made as to whether the gas burner was ever installed or was functioning.

7. The EPA Draft Feasibility Study of September 1985 reflects that:

--the primary source of contamination found at the Landfill is the production and subsequent migration of volatile organic contaminants, including those identified by IT Corporation and other toxics such as vinyl chloride.

--There are 25 drums on the surface at the bank of the Southern Tract, with other drums scattered on the surface of the Landfill. While soil testing reflected that the drums were not currently leaking, "the drums have never been sampled."

--The landfill was formed by "random dumping of various unknown wastes in open pits created by sand and gravel operations. " The depth is reported to average "25 feet." Only one of five test borings was conducted in the filled area, well MW-04 located at the edge of the filled area in the Central Tract. Bedrock was not encountered until 91.0 feet; sand and gravel was not encountered until a depth of 30 feet and continued until a depth of 91 feet.

--The nature of the waste landfilled is unknown. No sampling of either surface drums or landfilled waste appears to have been conducted.

Those are the "facts" or more appropriately the lack of facts that currently exist regarding the Landfill and the degree

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if current and future threat to the Riverside Gardens community.

The EPA currently lacks of data on the nature or volume of waste, the constituent pollutants, the degree of current migration of toxic gases, and other informational components necessary to any reasoned decision on or presentation of potential remedial actions. It appears that the agency has placed the cart before the horse, and is poised to make a decision on "remedial alternatives" which may threaten the health, quality of life and property values, and indeed the future of Riverside Gardens itself as a viable residential community. A comprehensive and immediate program of data collection and sampling must be undertaken to determine the nature and extent of the gas migration threat prior to presentation or choosing of final remedial action. The collection of this necessary data as background, base-line information should not be confused with actions to be taken to remedy the problem, and must precede any rational choice of truly remedial actions.

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#### Specific Concerns and Recommendations

There are a number of informational matters that are essential and are requested to be responded to by EPA in any final consideration of remedial action.



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1. Has any calculation been made of the anticipated levels of methane and other gas production, and production of volatile organics, over the future life of the landfill? How can a collection system be designed without knowing the anticipated production levels which it will be designed to handle?

2. Has any testing been conducted by EPA to determine the nature and threat from the 11 unidentified organics that were detected by IT Corporation in the assessment of the gas collection system? What are the constituent toxics being collected and emitted into the community from the gas collection system?

3. The county gas collection system apparently did not include the designed gas burner. What stack monitoring has and will be conducted to determine the organics content of the gas which is now being collected, concentrated and emitted into the vicinity of the Riverside Gardens neighborhood? What ambient monitoring is being conducted on a continuing basis (rather than on one dry-weather day) to determine the ambient levels of gases in the neighborhood?

3. Has any testing or sampling been conducted to determine the nature and constituent wastes in the landfill? It would seem that no rational determination of the necessity for excavation and removal of the wastes can be made absent this very

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fundamental information. The fact that a recently deposited drum of toxic constituents does not leak today gives no indication of future threat once the barrel corrodes or further subsidence causes drum ruptures.

4. In the face of 1975 data showing substantial gas migration into the neighborhood, and a faulty and inoperative gas collection system that has been inadequately maintained and allowed to decline in four short years, EPA has inappropriately concluded that there is no evidence of any threat to the community from gas migration. This assumption is both unsubstantiated by any ambient monitoring by EPA, or independent monitoring to determine the truth of the assumption. Proper scientific protocol and common sense, as well as the threat to human life, would dictate that continued migration would be assumed, in light of the 1975 data and the abject failure of the county gas collection system, until proven otherwise. What testing has been conducted at the Putman Avenue sites where the high concentrations of methane and organics-laden gases were first detected in 1975 in order to determine whether the county gas collection system is functioning so as to control gas migration? What testing will be conducted to determine the current degree of gas migration?

5. It appears that the core sampling that has been conducted does not give a true reading of the potential depth of the landfill. The site was formerly excavated for sand and

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gravel, obviously at below water table depth, since the depth to the gravel and sand from the surface was 30 feet and gravel and sand deposit continued until 91 feet. It is quite possible and far more reasonable to assume that the landfill, with or without pumping, deposited wastes at far greater depth and volume than projected, and that the Feasibility Study greatly underestimates the volume of the wastes and possible future groundwater impacts. What follow-up drilling will be conducted on-site to determine actual depth of stored waste?

#### Immediate Mitigation Steps

The Council firmly believes that any determination of long-term remedial actions must await collection of the information identified above. In the interim, certain basic steps must be taken to mitigate some obvious and known problems resulting from the Landfill. These include:

--A comprehensive testing program to determine health risks, including resident questionnaire, interviews with area physicians, certain continuous ambient monitoring stations.

--Those residents without city water must immediately be provided, without cost for hookups or lines necessary, potable

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drinking water through extensions of water lines from the Louisville Water Company. Those residents using private water supplies should not be left at risk while this process continues.

--Removal and testing of all exposed drums, and limiting access by vehicular traffic to the Landfill area.

--Riprapping the river bank in order to stabilize the fill against erosion.

These steps are immediate goals mandated by the current status of the site. They are in no fashion "remedial" in terms of curing or reducing the lingering threat from the site, and should not be treated as final remedial goals. They are short-term, immediate steps necessary to provide immediate protection while long-term solutions are developed from adequate data.

#### Choice of Alternatives

The Council believes that the Remedial Investigation phase of this project is incomplete and that the information so far collected is not yet sufficient to allow for designing or choosing of one of a set of remedial alternatives. The Council urges that meaningful background monitoring, waste nature and volume testing and a health risk assessment be undertaken immediately, as

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identified above, and that river bank stabilization and drum removal occur while the monitoring and data collection is completed in those areas where little or no data has been developed.

If the EPA insists on going forward at this point with a "solution" to a problem it has not yet adequately defined, the Council believes that the uncertainty and potential health risk that has hung over the Riverside Gardens community will not be adequately addressed until the landfill is excavated and the material removed. Once the needed background data is collected, it may be possible to justify Alternative No. 3 or 4, provided that a competent and responsible entity maintains, monitors and assures proper functioning of the gas collection system. But without knowing the nature of the material or current status of gas migration, neither the Council nor EPA can responsibly suggest those alternatives.

In any event, the first two alternatives are clearly inadequate and will not, as the report acknowledges, satisfy all applicable standards and protect public health and safety. They must be rejected under any scenario.